Zero-inflated Poisson regression with right-censored data

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Abstract:

The zero-inflated Poisson regression model is often used to analyse count data with an excess of zeros. This talk extends the model to randomly right-censored count data. Right-censoring occurs when one only knows that the true count value is higher than the observed one. In this setting, maximum likelihood estimators (MLE) are constructed and their properties are investigated. In particular, MLE are shown to be consistent and asymptotically normal. A simulation study is conducted to assess finite-sample behaviour of the MLE. Finally, an application in health economics is described.